CLAIMS

1. An aptamer-probe complex for detecting the presence of a target molecule, said complex comprising:

an aptamer moiety which is able to bind to an indicator protein and change the properties of said indicator; and

a probe moiety which is able to bind to the target molecule,

wherein said aptamer moiety and said probe moiety are combined in such a manner that the binding mode between the aptamer moiety and the indicator protein changes when the probe moiety binds to the target molecule.

2. The complex according to claim 1, wherein the target molecule is a nucleic acid, and the probe moiety of the aptamer-probe complex is an oligonucleotide capable of hybridizing with the nucleic acid.

3. The complex according to claim 1, wherein the target molecule is a protein or a small molecule, and the probe moiety of the aptamer-probe complex is an aptamer capable of binding to the protein or the small molecule.

4. The complex according to claim 3, wherein the indicator protein is an enzyme.

5. The complex according to claim 4, wherein the enzyme is thrombin.

6. The complex according to claim 1, wherein binding between the aptamer moiety and the indicator protein becomes stronger when the probe moiety binds to the target molecule.

7. The complex according to claim 1, wherein binding between the aptamer moiety and the indicator protein becomes weaker when the probe moiety binds to the target molecule.

8. The complex according to claim 1, wherein the target molecule is Salmonella bacteria gene, SARS virus gene or a portion thereof.

9. A kit for detecting the presence of a target protein, comprising the aptamer-probe complex according to any of claims 1 to 8.

10. A method for detecting the presence of a target molecule in a sample, comprising:

preparing an aptamer-probe complex comprising an aptamer moiety which is able to bind to an indicator protein and change the properties of said indicator protein, and a probe moiety which is able to bind to the target molecule, wherein said aptamer moiety and said probe moiety are combined in such a manner that the binding mode between the aptamer moiety and the indicator protein changes when the probe moiety binds to the target molecule;

contacting the sample with the complex; and

detecting the change in the properties of the indicator protein as an indicator of the presence of the target molecule in the sample.

11. The method according to claim 10, wherein the target molecule is a nucleic acid, and the probe moiety of the aptamer-probe complex is an oligonucleotide capable of hybridizing with the nucleic acid.

12. The method according to claim 10, wherein the target molecule is a protein or a small molecule, and the probe moiety of the aptamer-probe complex is an aptamer capable of binding to the protein or the small molecule.

13. The method according to claim 10, wherein the indicator protein is an enzyme.

14. The method according to claim 13, wherein the change in the

enzyme activity of the indicator protein is measured by a spectrophotometric technique.

15. The method according to claim 13, wherein the change in the enzyme activity of the indicator protein is measured by an electrochemical technique.

16. The method according to claim 13, wherein the enzyme is thrombin.

17. The method according to claim 10, wherein binding between the aptamer moiety and the indicator protein becomes stronger when the probe moiety binds to the target molecule.

18. The method according to claim 10, wherein binding between the aptamer moiety and the indicator protein becomes weaker when the probe moiety binds to the target molecule.

19. The method according to claim 10, wherein the target molecule is Salmonella bacteria gene, SARS virus gene or a portion thereof.